Title (en)

OPTOELECTRIC CONVERSION ELEMENT AND ITS MANUFACTURING METHOD, AND OPTOELECTRIC CONVERSION MODULE USING SAME

Title (de)

OPTOELEKTRONISCHES WANDLERELEMENT UND VERFAHREN ZU SEINER HERSTELLUNG UND OPTOELEKTRISCHES WANDLERMODUL DAMIT

Title (fr)

ELEMENT DE CONVERSION OPTO-ELECTRIQUE, PROCEDE POUR LE FABRIQUER ET MODULE DE CONVERSION OPTO-ELECTRIQUE L UTILISANT

Publication

EP 1870944 A4 20120104 (EN)

Application

EP 06729935 A 20060324

Priority

- JP 2006305987 W 20060324
- JP 2005087115 A 20050324

Abstract (en)

[origin: EP1870944A1] A photovoltaic conversion element includes a one conductivity-type crystalline Si semiconductor; an opposite conductivity-type semiconductor which is joined to the crystalline Si semiconductor to form a pn junction therebetween; an electrode provided on the opposite conductivity-type semiconductor; and a depletion region formed from the side of the one conductivity-type crystalline Si semiconductor to the side of the opposite conductivity-type semiconductor across the pn junction formed therebetween. The depletion region has a first depletion region located inside the crystalline Si semiconductor and under the electrode, and the first depletion region has an oxygen concentration of 1E18 [atoms/cm 3] or less.

IPC 8 full level

H01L 31/04 (2006.01); **H01L 31/0224** (2006.01); **H01L 31/068** (2012.01)

CPC (source: EP US)

H01L 31/022425 (2013.01 - EP US); **H01L 31/068** (2013.01 - EP US); Y02E 10/547 (2013.01 - EP US)

Citation (search report)

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- [A] JP 2004214442 A 20040729 - SANYO ELECTRIC CO
- [A] US 5327007 A 19940705 - IMURA MAKOTO [JP], et al
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US8198115B2; CN102077358A; EP2136407A3; EP2136408A3; EP3855510A4; US11810993B2

Designated contracting state (EPC)

DE

DOCDB simple family (publication)

EP 1870944 A1 20071226; **EP 1870944 A4 20120104**; **EP 1870944 B1 20160601**; JP 5010468 B2 20120829; JP WO2006101200 A1 20080904; US 2009211635 A1 20090827; US 8178778 B2 20120515; WO 2006101200 A1 20060928

DOCDB simple family (application)

EP 06729935 A 20060324; JP 2006305987 W 20060324; JP 2007509349 A 20060324; US 90959306 A 20060324